IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
    Richard Gilles
    Primel Odile
    Yean Leanirith
	Group Art Unit: Unknown

	Examiner: Unknown
Serial No.: Unassigned	Atty. Dkt. No.: ESSR:039US/MBW
Filed: Concurrently Herewith	

For: POLYMERIZABLE COMPOSITIONS
    FOR MAKING TRANSPARENT
    POLYMER SUBSTRATES, RESULTING
    POLYMER SUBSTRATES, AND USES
    THEREOF IN OPTICS	

EXPRESS MAIL MAILING LABEL
NUMBER   EL611001516US
DATE OF DEPOSIT   April 2, 2001

PRELIMINARY AMENDMENT

Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicants respectfully submit this Preliminary Amendment in the above-referenced case.

Consideration of this case in view of the amendments made herein is respectfully requested.

AMENDMENT

In the Specification:

Please amend the specification as follows:

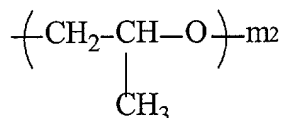At page 1, line 1, please insert the following paragraph:

--This application is a continuation of International Application No. PCT/FR00/02200 filed 31 July 2000, which claims priority to French Application No. FR 99/10031 filed 2 August 1999.--

Please add the Abstract attached hereto as Appendix C immediately following the claims.

In the Claims:

Please amend claims 2-24 as follows:

2.   (Amended) The composition of claim 1, characterized in that, in the monomer formula (I), said divalent A represents:
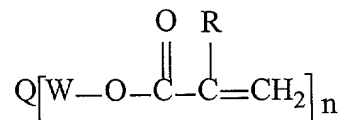
$$\left(CH_2\text{--}\underset{\underset{CH_3}{|}}{CH}\text{--}O \right)_{m2}$$

m2 being defined in claim 1.

3.   (Amended) The composition of claim 1, further defined as comprising from 40 to 60 parts by weight of monomers (I) and m_1 and m_2 are integers from 5 to 10.

4.   (Amended) The composition of claim 1, wherein the monomer (II) is a urethane di(meth)acrylate oligomer.
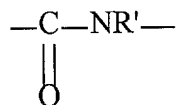
5.   (Amended) The composition of claim 4, wherein the urethane di(meth)acrylate oligomer is further defined as an alphatic polyester.

6.   (Amended) The composition of claim 1, wherein the monomer (II) has the formula:

$$\text{O} \quad \text{R}$$
$$Q\left[W-O-\overset{\parallel}{C}-\overset{\mid}{C}=CH_2\right]_n$$

wherein:

Q is a moiety of a valence n, with a straight, branched or cyclic structure, comprising at

least two units of formula:

$$-\overset{}{C}-NR'-$$
$$\overset{\parallel}{O}$$

W is a divalent alkyl moiety, with a straight or branched structure, containing from 1 to 5
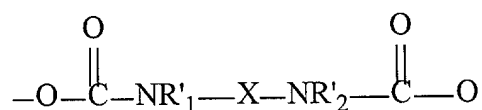
carbon atoms,

n varies from 2 to 4,

R represents H or CH_3, and
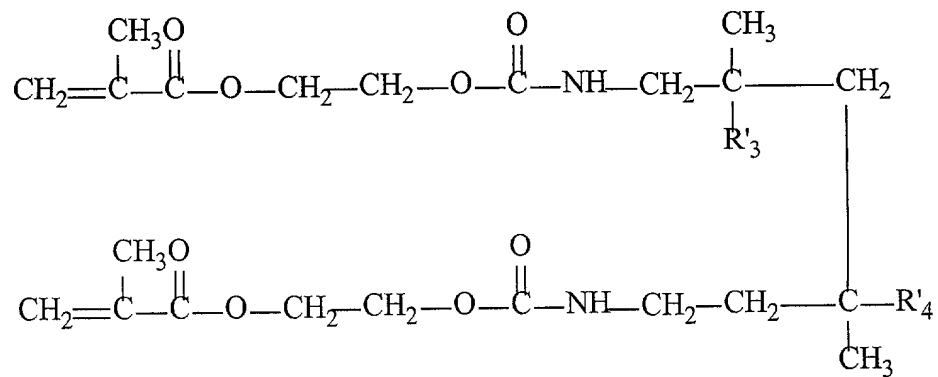
R^1 represents H or a valence link.

7.   (Amended) The composition of claim 6, wherein W represents the $-CH_2CH_2-$ moiety.

8.   (Amended) The composition of claim 6, wherein, in the monomer formula (II), the Q

moiety is a divalent moiety having the following formula:

$$\text{O} \qquad\qquad\qquad \text{O}$$
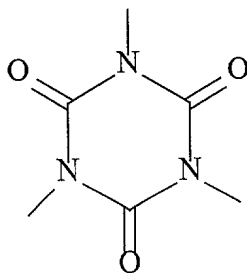$$-O-\overset{\parallel}{C}-NR'_1-X-NR'_2-\overset{\parallel}{C}-O$$

wherein X represents a straight or a branched divalent alkyl chain [having from 1 to 5 carbon

atoms, preferably from 8 to 12 carbon atoms], and R'_1 and R'_2 independent from one another

represent H or CH_2.

9.   (Amended) The composition of claim 8, wherein the monomer (II) has the following

formula:

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$$CH_2=\underset{\underset{CH_3}{|}}{C}-\underset{\underset{O}{\|}}{C}-O-CH_2-CH_2-O-\underset{\underset{O}{\|}}{C}-NH-CH_2-\underset{\underset{R'_3}{|}}{\overset{\overset{CH_3}{|}}{C}}---CH_2$$

$$CH_2=\underset{\underset{CH_3}{|}}{C}-\underset{\underset{O}{\|}}{C}-O-CH_2-CH_2-O-\underset{\underset{O}{\|}}{C}-NH-CH_2-CH_2---\underset{\underset{CH_3}{|}}{C}-R'_4$$

wherein R'$_3$ and R'$_4$ represent, independently from one another, H or CH$_2$.

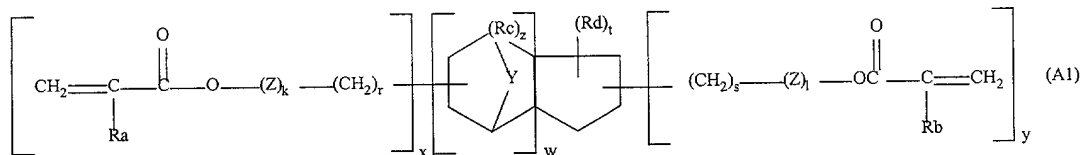10. (Amended) The composition of claim 6, wherein, in the monomer formula (II), Q represents a trivalent moiety of formula:
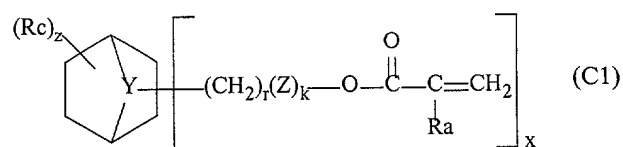
11.   (Amended) The composition of claim 10, wherein the monomer (II) has the following formula:

$$CH_2\!\!=\!\!\underset{\underset{R''_3}{|}}{C}\!-\!\overset{\overset{O}{\|}}{C}\!-\!O\!-\!CH_2\!-\!CH_2\!-\!N\overset{\overset{O}{\|}}{\diagup}\!\!\!\!\!\!\!\!\!\!\!\!N\!-\!CH_2\!-\!CH_2\!-\!O\!-\!\underset{\underset{O}{\|}}{C}\!-\!\underset{\underset{R''_1}{|}}{C}\!\!=\!\!CH_2$$

wherein R"$_1$, R"$_2$, and R"$_3$ represent, independently from each other, H or CH$_3$.

12.   (Amended) The composition of claim 1, further defined as comprising 30 to 40 parts by weight of monomer (II).
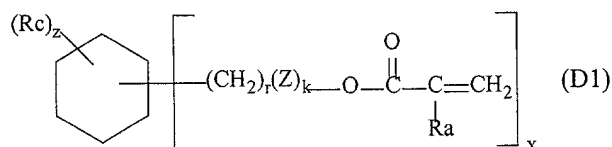
13.   (Amended) The composition of claim 1, wherein the monomer (III) with a high Abbe number comprises at least one non aromatic cyclic or polycyclic hydrocarbon moiety.

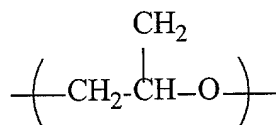14.   (Amended) The composition of claim 13, wherein the monomer (III) has a formula of:

$$\left[CH_2\!\!=\!\!\underset{\underset{Ra}{|}}{C}\!-\!\overset{\overset{O}{\|}}{C}\!-\!O\!-\!(Z)_k\!-\!(CH_2)_r\right]_x \underset{\underset{Rj}{|}}{\overset{\overset{(Rc)_z}{|}}{\bigcirc}}\!\!Ri\!\!\underset{}{\overset{\overset{(Rd)_t}{|}}{\bigcirc}}\left[(CH_2)_s\!-\!(Z)_l\!-\!O\overset{\overset{O}{\|}}{C}\!-\!\underset{\underset{Rb}{|}}{C}\!\!=\!\!CH_2\right]_y \quad (B1)$$

$$\left[CH_2\!\!=\!\!\underset{\underset{Ra}{|}}{C}\!-\!\overset{\overset{O}{\|}}{C}\!-\!O\!-\!(Z)_k\!-\!(CH_2)_r\right]_x \left[\overset{(Rc)_z}{\underset{w}{Y}}\overset{(Rd)_t}{}\right]\left[(CH_2)_s\!-\!(Z)_l\!-\!O\overset{\overset{O}{\|}}{C}\!-\!\underset{\underset{Rb}{|}}{C}\!\!=\!\!CH_2\right]_y \quad (A1)$$

$$(Rc)_z \diagdown \underset{Y}{\diagup} \left[(CH_2)_r (Z)_k - O - \overset{\overset{O}{\|}}{C} - \underset{\underset{Ra}{|}}{C} = CH_2 \right]_x \quad (C1)$$

or

$$(Rc)_z \diagdown \left[(CH_2)_r (Z)_k - O - \overset{\overset{O}{\|}}{C} - \underset{\underset{Ra}{|}}{C} = CH_2 \right]_x \quad (D1)$$

wherein:

Y is a divalent moiety selected amongst –0-, -CH3)2-, -C(H)(CH3)-,

Z is a divalent moiety selected amongst –(CH2)p-0-, p being an integer from 1 to 4, and

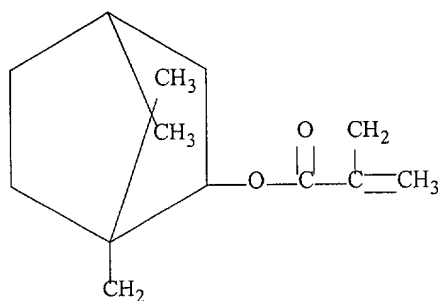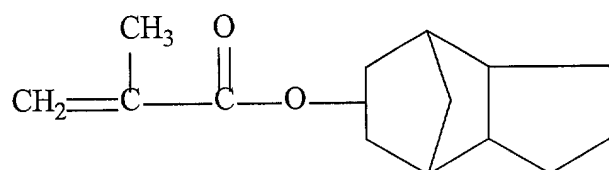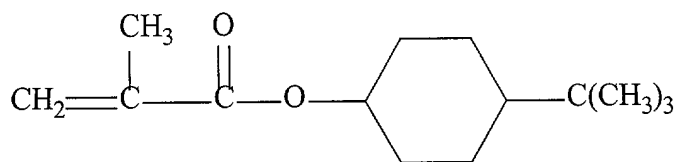$$\left(CH_2 - \underset{\underset{CH_2}{|}}{CH} - O \right)$$

R_a, R_b represent H or CH_3, R_c, R_d represent, independently from one another, a straight or a branched alkyl moiety, having from 1 to 6 carbon atoms,
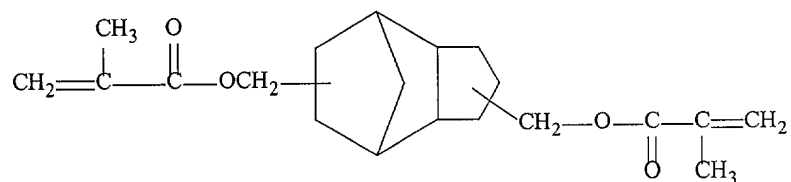
R_i, R_j represent, independently from one another, a straight or a branched alkyl moiety, having from 1 to 10 carbon atoms,

w is an integer of 1 to 3, x is an integer of 0 to 3, y is an integer of 0 to 3, providing that x + y is equal to or higher than 1, k is an integer of 0 to 6, 1 is an integer of 0 to 6, r is an integer of 0 to 6, s is an integer of 0 to 6, z is an integer of 0 to 3 and t is an integer of 0 to 3.

15.   (Amended) The composition of claim 14, wherein the monomer (III) has a formula of:

$$CH_2{=}\overset{\overset{\displaystyle CH_3}{|}}{C}{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}O{-}\bigcirc{-}C(CH_3)_3$$

(structure of methacrylate ester with tert-butyl cyclohexyl group)

$$CH_2{=}\overset{\overset{\displaystyle CH_3}{|}}{C}{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}O{-}$$

(structure of methacrylate ester attached to bicyclic ring system)

(structure of bicyclic ring system with two CH_3 groups, CH_2 group, and $-O-\overset{\overset{O}{\|}}{C}-\overset{\overset{CH_2}{\|}}{C}{-}CH_3$ ester group)

or

$$CH_2{=}\overset{\overset{\displaystyle CH_3}{|}}{C}{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}OCH_2{-}$$

(structure of methacrylate ester attached to bicyclic ring system with $CH_2{-}O{-}\overset{\overset{O}{\|}}{\underset{\underset{CH_3}{|}}{C}}{-}C{=}CH_2$ group)

16.   (Amended)   The composition of claim 1, further defined as comprising from 10 to 30 parts by weight of monomer (III).

17.   (Amended)   The composition of claim 1, wherein the monomers (II) and (III) each provide, through homopolymerization, a homopolymer with a refraction index lower than or equal to 1.54.

18. (Amended) The composition of claim 1, further defined as comprising one or more monomers (IV) polymerizable by radical mechanism and that are different from the monomers (I), (II) and (III), in a proportion of 0 to 40% by weight based on the total weight of monomers (I), (II) and (III).

19. (Amended) The composition of claim 1, wherein the monomer (IV) is such that its homopolymer has a refraction index lower than or equal to 1.54.

20. (Amended) The composition of claim 1, further defined as having a viscosity lower than or equal to 0.3 Pa.s.

21. (Amended) A transparent polymer substrate with a refraction index varying between 1.48 and 1.52, characterized in that it is obtained through polymerization of the composition of claim 1.

22. (Amended) An optical lens comprising a polymer substrate of claim 21.

23. (Amended) The optical lens of claim 22, further defined as an ophthalmic lens.

24. (Amended) The optical lens of claim 23, wherein the lens comprises glass.

Please add new claims 25-27 as follows:

--25. (New) The method of claim 8, wherein X represents a straight or a branched divalent alkyl chain having from 1 to 12 carbon atoms.

26. (New) The method of claim 25, wherein X represents a straight or a branched divalent alkyl chain having from 1 to 5 carbon atoms.

27.   (New) The method of claim 25, wherein X represents a straight or a branched divalent alkyl chain having from 8 to 12 carbon atoms.--
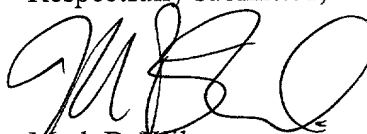
REMARKS

The specification has been amended to recite the priority data, to add an Abstract, to amend claims 2-24, and to add new claims 25-27. The filing fee has been calculated after amendment of the claims by the preliminary amendment

For the convenience of the Examiner, Appendix A is attached hereto containing a marked-up version of the claim amendments, and Appendix B is attached here containing a clean set of the pending claims.

Should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required, the Commissioner is hereby authorized to deduct said fees from Fulbright & Jaworski Deposit Account No. 50-1212/10102019/MBW.

Respectfully submitted,

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